

SURAT KETERANGAN

Nomor: 2527/UNUSA-LPPM/Adm.I/XI/2022

Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM) Universitas Nahdlatul Ulama Surabaya menerangkan telah selesai melakukan pemeriksaan duplikasi dengan membandingkan artikel-artikel lain menggunakan perangkat lunak **Turnitin** pada tanggal 22 November 2022.

Judul : The Influence of Propolis Compress on Phelebitis Score Reduction in Hospitalized Patients

Penulis : A Fudhali, HR Hakim Tobroni, Meggy Wulandari Kai, Novia Susanti and H M Salim

No. Pemeriksaan : 2022.11.28.1053

Dengan Hasil sebagai Berikut:

Tingkat Kesamaan diseluruh artikel (*Similarity Index*) yaitu 13%

Demikian surat keterangan ini dibuat untuk digunakan sebagaimana mestinya.

Surabaya, 28 November 2022

Ketua LPPM



UNUSA
LPPM

Achmad Syafiuddin, Ph.D

NPP: 20071300

LPPM Universitas Nahdlatul Ulama Surabaya

Website : lppm.unusa.ac.id

Email : lppm@unusa.ac.id

Hotline : 0838.5706.3867

The Influence of Propolis Compress on Phelebitis Score Reduction in Hospitalized Patients

by HotimahHotimah

Submission date: 22-Nov-2022 11:25AM (UTC+0700)

Submission ID: 1960957632

File name: Pros._The_Influence_of.pdf (486.28K)

Word count: 2931

Character count: 15682

PAPER · OPEN ACCESS

The Influence of Propolis Compress on Phelebitis Score Reduction in Hospitalized Patients

To cite this article: A Fudhali et al 2020 IOP Conf. Ser.: Earth Environ. Sci. 519 012008

View the [article online](#) for updates and enhancements.

You may also like

- [HPLC fingerprinting and pattern recognition of Brazilian green propolis and Chinese propolis](#)
Chumei Zhang, Meijuan Liu, Zeyu Liang et al.
- [Egyptian propolis 14: Potential antibacterial activity of propolis-encapsulated alginate nanoparticles against different pathogenic bacteria strains](#)
A G Hegazi, A S El-Houssiny and E A Fouad
- [In vitro degradation of zein nanofibres for propolis release in oral treatments](#)
Irene Bonadies, Francesca Cimino and Vincenzo Guarino



The Electrochemical Society
Advancing solid state & electrochemical science & technology

243rd ECS Meeting with SOFC-XVIII

More than 50 symposia are available!

Present your research and accelerate science

Boston, MA • May 28 – June 2, 2023

[Learn more and submit!](#)

The Influence of Propolis Compress on Phlebitis Score Reduction in Hospitalized Patients

A Fudhali¹, Hakim Tobroni HR², Meggy Wulandari Kai³, Novia Susanti⁴, H M Salim⁵

¹²³⁴ Master Study Program of Applied Nursing Nahdlatul Ulama University of Surabaya, Indonesia

⁵Departement of Biochemistry, Faculty of Medicine Univerity of Nahdlatul Ulama Surabaya, Indonesia

ahmadfudhali005.mk18@student.unusa.ac.id

Abstract. Phlebitis is complications of intravenous therapy. Warm compress can reduce degree of inflammation in patients with phlebitis. While propolis compress generally used to reduce the degree of dermatitis. This study aims to examine the effect of propolis compress to the score reduction of phlebitis. The study used *Quasy-experimental*. The independent variabel is propolis compress and dependent variable is phlebitis scores. The sample of the study are 10 respondents with phlebitis taken by *Non-Randomized Sampling* technique. The results showed average scores of phlebitis before treatment are an early sign of phlebitis, early stage, and moderate phlebitis stage with their respective percentage (30%). Furthemore, it's found 60% with score 0 or no phlebitis after the propolis compress treatment. Based on the test of *Paired T-Test*, there's different score between before and after propolis compress treatment that's marked by *p-value* $(0,000) < \alpha = 0,05$ Furthermore, the test result of *Independent T-Test* showed the *p-value* $(0,000) < \alpha = 0,01$. In conclusion, There's the effect of giving propolis compress to reduce the score of phlebitis. It's hoped to Paramedic's, especially nurses to perform alternative measures in handling the problem of nosocomial infections.

Keywords: Propolis Compress, Phlebitis

1. Introduction

Intravenous therapy is an important part of most therapies administered in the hospital, and is a common procedure that is given to patients who require vascular access.(1) More than 300 million IV catheter in the form of a plastic catheter or Teflon and metal needles used in hospitals in the country.(2) In connection with this IV therapy, it has identified a nursing problem frequently encountered is the occurrence of phlebitis and extravasation vein. According to Josephson, the complications most often occur as a result of IV therapy was phlebitis, an inflammation of the veins that occur as a result of unsuccessful insertion of venous contamination appliance IV and the use of hypertonic fluids are inadequate, the chemical can irritate the vein.(2)



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by IOP Publishing Ltd

According to surveillance data of the World Health Organization (WHO) stated that the incidence of nosocomial infections is high at 5% per year ie 9 million people from 190 million patients treated in hospitals.(3) Brigman Young University study in 2007 showed the incidence of phlebitis 5.79% of 432 patients. According to the MOH in 2006 the incidence of nosocomial infections such as phlebitis in Indonesia (17.11%).Based on a preliminary study conducted by researchers at the Hospital of Jombang Medika Unipdu there were 21 incident cases of phlebitis in the last three months commencing from January to March 2015.

The treatment is used to treat phlebitis has been the provision of Heparin Sodium ointments and compresses Alcohol.(4) Alcohol can cause skin irritation and cause dermatitis reactions were Heparin Sodium is expensive and is only prescribed for patients with upper middle income.(5) Handling phlebitis use warm compresses aims to reduce the pain caused due to phlebitis. (6) Propolis is a substance that can heal quickly and effectively used during the war BOER as a wound healer.(7) The use of traditional medicines into one of the alternatives in the treatment of inflammatory considered to be safer in terms of side effects and toxicity.(8) Inflammatory efficacy of propolis against most still healing in general and do not use sterile techniques that can lead to cross-infection, so it is important to be investigated influence propolis compresses against the expected decrease in score phlebitis end result could improve health care in the hospital.

2. Methodology

This study uses Quasy Experimental research approach to pretest-posttest control group design. In this design the intervention group were given propolis compress action while the control group only with warm compresses action. In both groups starting with the pre-test and after the administration of the treatment in the experimental and control groups, conducted back in the post-test. The population in this study are allinpatients at the hospital. Medika Unipdu Jombang numbered 21 people, The sample size of this study sample size in this study, with estimates of the number of samples in each group, calculated by the following formula(5):

$$n = \frac{1}{1-f} \times \frac{2(Z\alpha + Z\beta)^2 \cdot SD^2}{Xc - Xt^2} 1,25 \times \frac{(8,5849) \cdot (50,438)}{(158,760)}$$

$$n = 1,25 \times 5,455$$

$$n = 6,819$$

$$n = 7 \text{ Responden}$$

So minimal sample in this study were 7 samples for each group, and to anticipate the occurrence of dropouts during the study researchers took a sample of 18 samples to be divided into two parts. 10 for the treatment group and the remaining 8 for the control group.This study uses Consecutive Sampling (Sequential). Data were analyzed using SPSS 21 by paired sample t-test with significance $\alpha = 0.05$ and independent sample T-test with significance $\alpha = 0:01$

3. Result and Discussion

1. General Data

This general data presents the results obtained about the general characteristics of respondents including the type of fluid therapy, length of treatment and respondent phlebitis score at Unipdu Medika Hospital in Jombang

Table 1. Percentage Distribution of Respondents in the Treatment Groups by Type Fluid Therapy in Unipdu Medika Hospital Jombang, on May 19th till June 10th, 2015

No.	Type of Liquid Therapy	Frequency	Presentage (%)
1	D5%	8	80.0
2	NaCl 45%	1	10.0
3	RL+D5%	1	10.0
Total		10	100

Source: Primary Data

Based on Tabel 1, above shows that respondents most treatment groups with fluid therapy RL + D5% (60%) and with fluid therapy and NaCl45% D5% respectively (20%). While the control group of respondents mostly with fluid therapy RL + D5% (62%) and the lowest is to D5% (13%).

Tabel 2. Percentage Distribution of Respondents in the Treatment Groups by how long Care in Unipdu Medika Hospital Jombang, on May 19th till June 10th, 2015

No.	Treatment Time	Frequency	Presentage (%)
1	1-3 Days	3	30.0
2	4-8 Days	6	60.0
3	7-12 Days	1	10.0
Jumlah		10	100

Source: Primary Data

Based on Tabel 2, above shows that the majority of respondents to the treatment group with treatment duration 4-8 days (60%) and least with treatment duration of 7-12 days (10%). Whereas for most of the control group with treatment duration of 4-6 and 7-12 days with the percentage of each (37%).

Tabel 3. Percentage Distribution of Respondents in the Treatment Groups by Phlebitis Score in Unipdu Medika Hospital Jombang, on May 19th till June 10th, 2015

Score	Phlebitis Score	Frequency	Presentage (%)
0	No signs of phlebitis	0	0.0
1	Possibly first signs	3	30.0
2	Early stage of phlebitis	3	30.0
3	Medium stage of phlebitis	3	30.0
4	Start of trombophlebitis	1	10.0
5	Advanced stage trombophlebitis	0	0.0
Jumlah		10	100

Source: Primary Data

Based on Tabel 3 above shows that respondents to the treatment group had the same percentage between early signs of phlebitis, phlebitis early stage, moderate stage and advanced stage phlebitis (30%). As for the control group respondents with early and moderate stages of phlebitis have a percentage amount (37%) and least with phlebitis of advanced stage (26%).

2. Special Data

Some text. This special data presents the results obtained about the effect of propolis compresses on decreasing phlebitis scores at Unipdu Medika Hospital in Jombang.

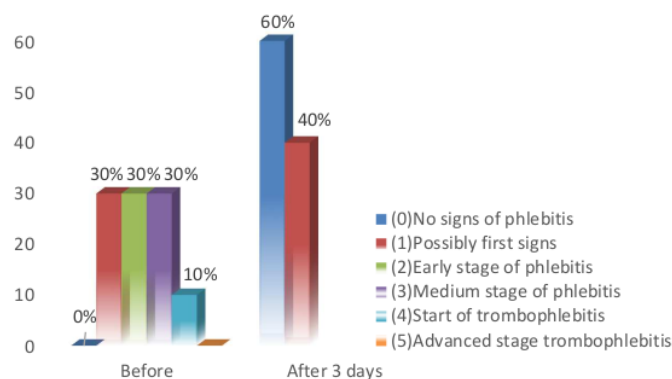


Chart Diagram 1. Percentage Difference Score Phlebitis Before and After Treatment In Treatment Groups Unipdu Medika Hospital in Jombang, on May 19th till June 10th 2015

Based on chart diagram 1, percentage difference score phlebitis before and after compress propolis above shows the score phlebitis respondent before action compresses propolis are in the early signs of phlebitis, an early stage of phlebitis, stage of moderate phlebitis with the percentage of each (30%) and respondents with at least advanced stage of phlebitis (10%). The results of observations on the third day giving compress propolis obtain significant results are shown in the graph no phlebitis as much (60%) and there are scores of phlebitis 1 or early signs of phlebitis (40%), but no longer have the early stages, moderate and advanced phlebitis, The decline in scores before and after treatment phlebitis compress propolis has decreased significantly, which in paired samples T-test probability values obtained ($\alpha = 0.05$).

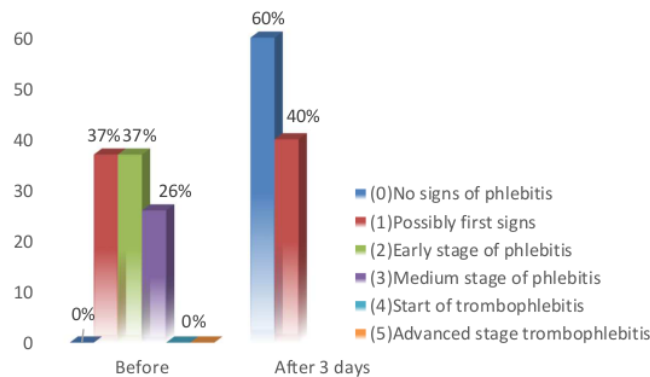


Chart Diagram 2. Percentage Difference Score Phlebitis Before and After Treatment In Control Groups Unipdu Medika Hospital in Jombang, on May 19th till June 10th 2015

Based on chart diagram 2, difference in scores phlebitis before and after treatment in the control group at the top shows that the score of phlebitis before action hot compresses highest are in the early signs of phlebitis and the early stages of phlebitis with the percentage of each (37%), and lowest in stage moderate phlebitis (26%). The results of the third day of observation in the control group obtained a percentage of early signs of phlebitis and early stage phlebitis each has a percentage (50%). Decrease phlebitis scores before and after applying warm compresses to the control group had a significant decrease, which in paired samples T-test probability values obtained (0.004) is much smaller than standard significant ($\alpha = 0.05$).

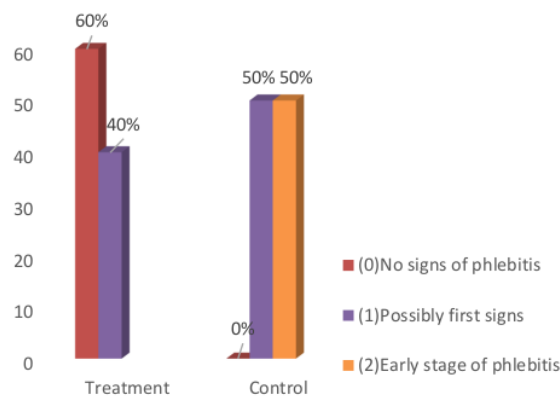


Chart Diagram 3. Percentage The Effect of compression of propolis on decreasing phlebitis scores at Unipdu Medika Hospital Jombang, May 19 to June 10, 2015.

Based on chart diagram 3, the compressive influence of propolis on the decline in phlebitis score above shows the difference in high enough phlebitis scores. The treatment group had the highest percentage with a score of 0 or no phlebitis (60%) and the lowest with early signs of phlebitis (40%). The control group has the same percentage between early signs of phlebitis and the early stages of phlebitis, respectively (50%).

Effect of propolis compress to decrease score phlebitis have significant value, namely the independent test samples T-test probability values obtained (0,000) is much smaller than standard significant ($\alpha = 0.01$).

Compress propolis can affect a decrease in score phlebitis this is due to the effects of a warm compress can help vasodilation of blood vessels to improve blood circulation in the blood vessels that experienced phlebitis. Warm compresses can provide a sense of comfort and eliminate factors that trigger inflammation such as histamine and bradykinin. Besides, the propolis with the flavonoid and quercetin in the liquid warm compresses it will have no effect on the enzyme lipooksigenase and cyclooxygenase which will issue a prostaglandin and neutrofil, kedunya is a major mediator of inflammation, so that the compress propolis is more effective than therapy warm compresses because the two processes in the healing of phlebitis.

According to Perry & Potter states that a warm compress can be used in the treatment of pain and inflammation because it will enlarge the blood vessels (vasodilation) and will increase the supply of blood throughout the body, so that it can eliminate the factors that cause inflammation such as histamine and bradykinin. CAPE existing content of the flavonoids and quertecin could affect siklooksiginase track. Both of these compounds are equally serve to obstruct the path lipooksignase and sikloosignase.(9)

Propolis is usually presented in a liquid form and often in use in mix with warm water to a certain temperature and with a certain dose, usually depending on the disease and age.(10) Compress when applied on the skin surface, the dominant effect of the fluid will act to soften due to diffusion of the liquid into a foreign term located above the surface of the skin; a small portion will be evaporated.(2) And compounds present in the fluid can compress evaporated, then the active compound bound to the coating that is passed as the epidermis and dermis. In certain circumstances compress liquid preparations can carry the active ingredients to penetrate the hypodermic. Meanwhile, the active ingredient in topical preparations will be absorbed by the vascular skin to the dermis and hypodermis. (11)

4 Conclusion

Based on the purpose of research and discussion, it can be concluded that the effect of propolis compress the decrease score phlebitis, in getting as follows:

1. Results observation phlebitis score before action compresses propolis had significant differences with phlebitis score after action compresses propolis
2. Observed during the three-day provision of propolis compress show a decline in scores phlebitis each treatment and the occurrence of a very significant reduction on the third day or eight hours to six treatments propolis compress.

This is in line with warm compresses can increase comfort, reduce pain and as a mediator to bring the active compounds to penetrate the layers of skin hypodermis. The content of propolis in the fluid compresses will release the active compounds flavonoids and quercetin which have anti-inflammatory effects, into the area of inflammatory through the processes as most stocks topical that penetrates hypodermic, flavonoids absorbed by veskuler skin to the dermis and hypodermis thus providing stimulation to the enzyme sykolosignase and lipoksignase to stop expenditure neutropil hormones and prostaglandins which is the main mediator of the inflammation. The results can be affected by several factors such as the type of fluid treatment duration and the level of compliance, but these factors outside of the control in this study.

References

- [1] Gabriel. Standards for infusion therapy. R Coll Nurs [Internet]. 2010; Available from: http://www.rcn.org.uk/_data/assets/pdf_file/0005/78593/002179.pdf
- [2] Upoyo AET& AS. Analisis Faktor-faktor yang Berpengaruh Terhadap Kejadian Phlebitis di RSUD Purbalingga. J Keperawatan Soedirman. 2006;1(1):43–54.
- [3] Agustini C-, Utomo W-, -. A. Analisis Faktor yang Berhubungan dengan Kejadian Phlebitis pada Pasien yang Terpasang Infus di Ruang Medikal Chrysan Rumah Sakit Awal Bros Pekanbaru. J Online Mhs Progr Stud Ilmu Keperawatan Univ Riau [Internet]. 2014;1(1):1–9. Available from: <https://www.neliti.com/id/publications/186499/analisis-faktor-yang-berhubungan-dengan-kejadian-phlebitis-pada-pasien-yang-terp>
- [4] Nasrudin, S D. Perbandingan Pengaruh Pengobatan Ekstrak Daun Lidah Buaya (Aloe-Vera) dan Heparin Sodium Terhadap Penyembuhan Flebitis. Unipdu. 2012;2:210–7.
- [5] M R, Indah. Pemanfaatan Ekstrak Lidah Buaya (Aloe vera) Pada Pasien Phlebitis Untuk Mengurangi Biaya Perawatan di Rumah Sakit. Unipdu. 2011;1:238–45.
- [6] Perr, Higginsen. 130911_Review_Higginson. Nurs Pract. 2013;107(36).
- [7] Galvao, Abreu J., Cruz T, Machedo GAS, P. N, A. D, et al. Beological Therapy Using Propolis as Nutritional Suplement in Cancer Treatment. Int J Cancer Res. 2007;3:43–53.
- [8] Awang DV. Tyler's Herbs of Choice The Therapeutic Use of Phytomedicinals. 3rd ed. CRC, editor. USA: CRC Press; 2009. 269 p.
- [9] Sabir A. Aktivitas antibakteri flavonoid propolis Trigona sp terhadap bakteri Streptococcus mutans (in vitro) (In vitro antibacterial activity of flavonoids Trigona sp propolis against Streptococcus mutans). Dent J (Majalah Kedokt Gigi). 2005;38(3):135.
- [10] Suranto A. Dahsyatnya Propolis Untuk Menggempur Penyakit. 1st ed. Jakarta: ArgoMedika Pustaka; 2010. 10 p.
- [11] Yenny SW. Berbagai Bentuk Sediaan Dermatological. Cdk-194. 2012;39(6):423–30

The Influence of Propolis Compress on Phelebitis Score Reduction in Hospitalized Patients

ORIGINALITY REPORT

13%

SIMILARITY INDEX

13%

INTERNET SOURCES

11%

PUBLICATIONS

8%

STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

6%

★ repository.unitas-pdg.ac.id

Internet Source

Exclude quotes On

Exclude matches < 1%

Exclude bibliography On